harman/kardon

OWNER'S MANUAL

harman/kardon

SPEAKER SYSTEM

SPEAKER MODELS:

Ten

Twenty

Thirty

Forty

Congratulations on your purchase of a harman/kardon speaker system. Your choice of a harman/kardon loudspeaker shows that you demand quality reproduction in your sound system.

A thorough understanding of modern performance requirements, along with our commitment to using the best components ensures you a high performance, superbly designed and finished product representing true and lasting value.

We recommend that you take the time to read this manual. This will assist you in the set-up of your speakers, and help you realise many years of quality listening pleasure.

Should you have any additional questions, please contact your dealer. He is able and willing to aid you in getting the best from your system.

CONNECTIONS

1. Turn off your amplifier Turning off your amplifier when connecting your speakers prevents accidents like short circuits which can damage your system. You should never change any connections without turning your system off.

2. Choose a quality speaker wire It is important to choose a quality speaker wire to ensure top performance. This is especially true if your amplifier and speakers are far apart. Specialty cables are available from your HiFi dealer for this purpose. Should these not be available or if you should choose to use regular wire, please follow the chart below in selecting the correct gauge.

up to 15 ft. (5m)	16 ga.(1.3 mm)
15-30 ft. (5 to 10m)	14 ga.(1.6 mm)
over 30 ft. (10m +)	12 ga.(2.0 mm)

3. Wiring it right On the back of your speakers, you will see two terminals, red and black. The red terminal must connect to the positive terminal (+ve) of the amplfier, while the black must connect to the negative (-ve). If one of these connections is reversed, bass output will drop dramatically. In this condition, the speakers are out of phase. If both speakers are connected in reverse, bass output remains constant, but absolute phase is lost. For further explanations of these terms, contact your dealer.

PLACEMENT

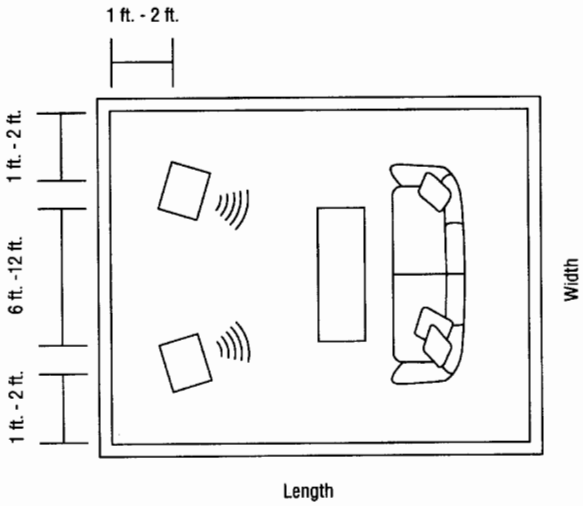
Your harman/kardon speakers have been designed to provide a large listening "window", making their positioning in a room fairly simple. However, some fundamental acoustic rules should be adhered to, to ensure top performance.

Set your speakers 6-12 feet apart, depending on room size. If possible place them facing the long end of the room. The best listening area will extend approximately the same distance in front of the speakers.

Both speakers should be the same height off the floor. In most situations the speakers should be slightly angled in towards each other. Experiment.

harman/kardon speakers should never be placed against a wall. If their backs are against the rear wall, bass output will be exaggerated making the system sound boomy and unrealistic. If they are too close to a side wall, midrange performance will suffer.

A typical, satisfactory installation is shown below.



POWER HANDLING & PROTECTION

The commercial methods of determining power handling are as varied as the number of manufacturers. No scientific method exists which can account for all the complexities music presents. So, the power handling capacity of your harman/kardon loudspeakers depends as much on the accompanying equipment and the type of music you listen to as it does on the individual components in the loudspeaker system. For instance, a small 25 Watt amplifier driven hard is very capable of destroying a speaker that would be comfortable at that listening level with a 200 Watt amplifier.

All speakers, however, even in a well balanced system have a finite power limit. Speakers give audible indications when they are approaching those limits. A speaker close to it's power limit will sound distorted, strained, and harsh. When your speakers begin to sound like that, TURN THE VOLUME DOWN to avoid damage.

If you wish, "In-line" fuses can be purchased to protect the speaker against the most violent abuses. Fuses, however, degrade the signal.

ACCOMPANYING EQUIPMENT & OPERATING INSTRUCTIONS

The equipment you choose to complement your harman/kardon speakers will have a direct bearing on the quality of sound reproduction obtained. Your harman/kardon speakers are capable of the highest possible performance and will complement the finest electronic equipment available.

Once your system is set-up and performing to your satisfaction, a few simple maintenance routines are in order for long-term satisfaction.

The surfaces of all harman/kardon speakers are finished to allow for ease of maintenance. Occasional cleaning can be done with a damp rag on all exterior surfaces of your harman/kardon speaker.

In general, do not place your harman/kardon speakers close to sources of high heat. Continuous sunshine will damage lacquer finishes and excessive dampness can cause damage to wood components.

All contacts should have firm connections. Periodic cleaning with a contact cleaner will prevent signal degradation due to corroded contacts.

SPEAKER STANDS

All speakers that are not designed to be floor standing will benefit from being placed on a stand. Some harman/kardon models have stands that have been uniquely designed to complement their looks and performance. All harman/kardon stands and bases for floor standing models have provisions for spikes that solidly connect the speaker/stand to the floor. These should be used. Providing a solid mechanical conduit for unwanted resonance and vibration enables the speaker to produce bass frequencies with greater clarity and articulation.

They will also stabilize the speaker on a carpeted floor by slipping through the carpet and linking the speaker/stand with the floor underneath. Another benefit is that they leave no mark on the carpet unlike a stand that sits directly on the pile.

They will not harm a hardwood floor, leaving only tiny holes that are almost invisible. A rubber foot will eventually leave depressions and may even stain the surface. To move the speaker always lift VERTICALLY first to avoid catching the spikes. A WORD OF WARNING, the spikes are quite sharp so care should be taken to avoid injury.

LIMITED WARRANTY

YOUR HARMAN/KARDON SPEAKER SYSTEM IS WARRANTED FOR A PERIOD OF 5 YEARS FROM THE DATE OF ORIGINAL PURCHASE.

WHO IS PROTECTED BY THIS WARRANTY

Your harman/kardon warranty protects the original owner and all subsequent owners, so long as the original bill of sale is presented when warranty service is required.

WHAT IS COVERED BY THE HARMAN/KARDON WARRANTY

Your harman/kardon warranty covers all defects in material and workmanship with the following specified exceptions. These are: (1) damage caused by accident, unreasonable use or neglect (including the lack of reasonable and necessary maintenance); (2) damage occurring during shipment (claims must be presented to the carrier); (3) damage to or deterioration of any accessory or decorative wooden surface; (4) damage resulting from failure to follow instructions contained in your owner's manual; (5) damage resulting from the performance of repairs by someone other than harman/kardon or an authorized harman/kardon warranty station; (6) any harman/kardon unit on which the serial number has been effaced, modified or removed; (7) units used as demonstration or display models prior to purchase by the original consumer owner; and, (8) units used for the purpose other than home use.

HOW TO OBTAIN WARRANTY PERFORMANCE

If your harman/kardon product ever needs service, write to us at harman/kardon, Incorporated, 8380 Balboa Boulevard, Northridge, CA 91325 (Attention: Customer Relations Department). We may direct you to send your unit to the factory for repair in which case we'll also supply a Service Return Authorization and complete shipping instructions. Either way, you'll need to present the original bill of sale to establish the date of purchase. Please do not ship your harman/kardon product to the Northridge address without our prior written authorization.

If service under this warranty is not necessary but you have questions regarding the installation or operation of this unit, please write to our Customer Relations Department at the address above.

WHO PAYS FOR WHAT

harman/kardon will be happy to pay all labor and material expenses for all repairs covered by this warranty. If necessary repairs are not covered by this warranty, or if a unit is examined which is not in need of repair, you will be charged for the repairs or the examination.

Although you must pay any shipping charges incurred in getting your harman/kardon product to a harman/kardon Authorized Warranty Station or to the factory, we will pay return shipping charges if the repairs are covered by the warranty. Please be sure to save the original shipping cartons because a nominal charge will be made for additional cartons.

LIMITATION ON IMPLIED WARRANTIES

Implied warranties of merchantability and fitness for particular purpose are limited in duration to the length of this warranty, unless otherwise provided by state law.

EXCLUSION OF CERTAIN DAMAGES

HARMAN/KARDON'S LIABILITY IS LIMITED TO THE REPAIR OR REPLACEMENT AT OUR OPTION, OF ANY DEFECTIVE PRODUCT AND SHALL IN NO EVENT INCLUDE INCIDENTAL OR CONSEQUENTIAL COMMERCIAL DAMAGES OF ANY KIND.

SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS AND/OR DO NOT ALLOW THE EXCLUSION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS AND EXCLUSIONS MAY NOT APPLY TO YOU.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

We sincerely thank you for your expression of confidence in harman/kardon products. This equipment has been painstakingly assembled by highly trained craftspeople. It should give you many years of musical enjoyment.

Printed in Canada